Sheet classification : Restricted

National Aeronautical Laboratory	**Documentation Sheet**	*Document Classification* Restricted
Title : TESTS ON NAL-114-26-00 SYMMETRIC SUPERCRITICAL AIRFOIL IN 0.3M WIND TUNNEL		*Document No.* PD EA 8909 *Date of issue*: April 1989
Author(s) : K. Krishnamurthy		*Contents* 59 pages Text 6 Table 1 Figures 52
Division : Experimental Aerodynamics		*No. of copies*: 20
External participation :		*NAL Project No.* AE-9-006
Sponsor :		*Sponsor's Project No.*
Approval : Head, Experimental Aerodynamics Division		
Remarks :		
Keywords : SUPERCRITICAL AIRFOIL, 2D-AIRFOILS, EXP. PRESSURE DISTRIBUTION.		

Abstract :

This report presents the results of the experimental investigation on a NAL-114-36-00 symmetric supercritical airfoil developed at NAL and tested in 0.3m wind tunnel over a free stream Mach number range of 0.53 to 0.85 and angle of incidence range of 0° to 4°. Model surface pressures were measured and compared with the theoretical pressure distribution of the same airfoil and also of baseline airfoil NACA0012. Comparison showed that the symmetric supercritical aerofoil was shock free at design Mach number and angle of incidence, matching with theoretical predictions whereas NACA0012 airfoil had strong shock for the same design conditions.